

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 47

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YASUAKI YAMAMOTO

Appeal No. 1997-1161
Application 08/487,226

HEARD: March 21, 2000

Before OWENS, WALTZ and KRATZ, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1, 2 and 6-8, and refusal to allow claims 3-5 as amended after final rejection. These are all of the claims in the application.

THE INVENTION

Appellant's claimed invention is directed toward a flame

retardant composition for electrical insulation and sheathing of wire and cables. The composition includes recited amounts of a polyolefin polymer, a metal hydroxide or hydrated metal salt, a polyolefin based polymer or oligomer grafted or polymerized with a vinyl bearing species, and an organopolysiloxane compound. Appellant states that the composition does not evolve toxic or corrosive gases as it burns (specification, page 1, lines 7-9). Claim 1 is illustrative and reads as follows:

1. A flame retardant resin composition for electrical insulation and sheathing of wire and cables which has enhanced oil resistance and excellent processing characteristics, comprising (a) 100 parts by weight of a polyolefin polymer, (b) 50 to 200 parts by weight of metal hydroxide or hydrated metal salt selected from the group consisting of aluminum hydroxide, magnesium hydroxide, calcium hydroxide, basic magnesium carbonate, and hydrocalcite, or mixtures thereof, (c) 3 to 20 parts by weight of a polyolefin based polymer or oligomer grafted or copolymerized with a vinyl bearing species selected from the group consisting of a vinyl hydroxy carboxylic acid, a vinyl carboxylic acid, a vinyl hydroxy dicarboxylic acid, a vinyl dicarboxylic acid, and esters and anhydrides thereof, which polyolefin (c) differs from olefin (a), and (d) 1 to 10 parts by weight of an organopolysiloxane compound wherein components (b) - (d) are all based on 100 parts by weight of the polyolefin polymer(a).

THE REFERENCES

Abolins et al. (Abolins)	4,497,925	Feb. 5, 1985
Yusawa et al. (Yusawa)	4,983,742	Jan. 8, 1991

Appeal No. 1997-1161
Application 08/487,226

Keogh 5,104,920 Apr. 14, 1992
(filed Jun. 14,
1989)

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1-8 over Yusawa in view of Abolins, and claims 1, 2 and 6-8 over Keogh.

OPINION

We have carefully considered all of the arguments advanced by appellant and the examiner and agree with appellant that the aforementioned rejections are not well founded. Accordingly, we reverse these rejections. We need to address only the broadest claim, i.e., claim 1.

Rejection over Yusawa in view of Abolins

Yusawa discloses a fire retardant 1-butene resin composition which contains components falling within the scope of appellant's components (a), (b) and (c) of claim 1, in amounts which overlap the amounts recited in the claim (abstract). Yusawa does not disclose appellant's

organopolysiloxane component (d).

Abolins discloses polymeric resins which contain, to improve their flame resistance, a blend of hydrated alumina and polyphenylene oxide, or a blend of hydrated alumina, polydiorganosiloxane and polyphenylene oxide (abstract). The polydiorganosiloxane usually is 0.1-6 wt% of the composition (col. 3, lines 35-37).

The examiner argues that it would have been obvious to one of ordinary skill in the art to add Abolins' polydiorganosiloxane to Yusawa's composition because it is conventional to use a flame retardant in an analogous flame retardant composition (answer, pages 5 and 8). This argument is not well taken because the examiner has provided no supporting evidence. The examiner's speculation is not a sufficient basis for a *prima facie* case of obviousness. See *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968); *In re Sporck*, 301 F.2d 686, 690, 133 USPQ 360, 364 (CCPA 1962).

The examiner argues that Abolins discloses at page 3, lines 5-14, adding to the composition conventional fire

retardants such as polydimethylsiloxane in order to improve the properties of the composition (answer, page 11). In the portion of the reference relied upon by the examiner, however, Abolins does not refer to polydimethylsiloxane. The conventional fire retardants which have the "aforementioned adverse factors" referred to by Abolins (col. 3, line 14) are those at column 1, lines 10-15. The representative examples of such fire retardants set forth by Abolins are phosphorous-, antimony- and halogen-containing compounds (col. 1, lines 13-15). Abolins discloses that the drawbacks and undesirable factors of the conventional fire retardants are overcome by using as a fire retardant a blend of hydrated alumina and polyphenylene oxide, alone or in with a polydiorganosiloxane (col. 1, lines 23-32). The portion of Abolins relied upon by the examiner discloses that conventional fire retardants may be used in combination with these blends to improve the properties of the fire retardant composition, and that doing so minimizes or eliminates the adverse factors often associated with the use of the conventional fire retardants. This portion, however, does not disclose that adding a

polydiorganosiloxane to a fire retardant composition improves the properties of the composition.

In order for a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the art. See *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case of obviousness. See *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The examiner must explain why the prior art would have suggested to one of ordinary skill in the art the desirability of

the modification. See *Fritch*, 972 F.2d at 1266, 23 USPQ2d at 1783-84. The examiner has not provided such an explanation and, therefore, has not established a *prima facie* case of obviousness of the invention recited in any of appellant's claims. Accordingly, we reverse the rejection over Yusawa in

view of Abolins.¹

Rejection over Keogh

Keogh discloses a flame retardant composition including a crosslinkable thermoplastic resin and, per hundred parts by weight of the thermoplastic resin, about 180 to about 350 parts by weight of a metal hydrate, about 0.1 to about 5 parts by weight of an organic peroxide, and about 0.1 to about 10 parts by weight of a vinyl substituted silicone fluid (col. 1, lines 60-68; col. 2, lines 47-50; col. 3, lines 37-41; col. 4, lines 13-18).

The examiner argues that it would have been obvious to one of ordinary skill in the art to use a blend of the polymers because doing so is suggested by the references (answer, page 6).

Keogh's "thermoplastic resin can be any homopolymer or

¹Since no *prima facie* case of obviousness has been established, we need not address the experimental results relied upon by appellant (declaration filed August 20, 1993, attachment to paper no. 14). See *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

copolymer produced from two or more comonomers, or a blend of two or more of these polymers, conventionally used as jacketing and/or insulating materials in wire and cable applications" (col. 2, lines 3-7). The blend could possibly include both a polyolefin polymer and a polyolefin polymer copolymerized with an anhydride of a vinyl dicarboxylic acid, i.e., maleic anhydride (col. 2, lines 9-25). However, no such copolymer is disclosed. In order to arrive at appellant's combination of components (a) and (c) in claim 1, one of ordinary skill in the art would have had to select, from the enormous number of combinations encompassed by Keogh's disclosure, a polyolefin/maleic anhydride copolymer and another polyolefin, which is different from the copolymer, and blend them in the relative amounts recited in appellant's claim 1. The examiner has not explained why Keogh reasonably would have led one of ordinary skill in the art to this combination. Accordingly, we reverse the rejection over Keogh.

Appeal No. 1997-1161
Application 08/487,226

DECISION

The rejections under 35 U.S.C. § 103 of claims 1-8 over
Yusawa in view of Abolins, and claims 1, 2 and 6-8 over Keogh,
are reversed.

REVERSED

TERRY J. OWENS)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
THOMAS A. WALTZ)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
PETER F. KRATZ)	
Administrative Patent Judge)	

Appeal No. 1997-1161
Application 08/487,226

TJO/pgg
Sughrue Mion Zinn Macpeak & Seas
2100 Pennsylvania Avenue NW
Washington, DC 20037-3202